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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/032,648

10/23/2001

Takeo Kanade

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EXAMINER

ANYIKIRE, CHIKAODILI E

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/032,648	<b>Applicant(s)</b> KANADE ET AL.	
	<b>Examiner</b> CHIKAODILI E. ANYIKIRE	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9/18/2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :20011023, 20021107, 20031027, 20050126, 20050516.

### **DETAILED ACTION**

1. This application is responsive to application number (10032648) filed on October 23, 2001. Claims 1-36 are pending and have been examined.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6 recites the limitation "the mapping module" in the claim but no where in the independent or claim 4 from which it depends on. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-11, 14-24, and 27-36 rejected under 35 U.S.C. 102(e) as being anticipated by Foote et al (US 7,015,954, hereafter Foote).

As per **claim 1**, Foote discloses a system for obtaining video of a moving fixation point within a scene, comprising:

a control unit (col 6 lines 37-43; sends out commands regarding pan, zoom);

a plurality of non-moving image capturing devices positioned around the scene, wherein the scene is within a field of view of each image capturing device (Fig 1A element 10, col 5 lines 51-53 and 57-61);

a plurality of image generators (Fig 1A element 10), wherein each image generator is in communication with one of the image capturing devices, and wherein a first of the image generators is responsive to a command from the control unit (col 11 lines 53-55); and

a surround-view image sequence generator (Fig 12 element 1220) in communication with each of the image generators and responsive to the command from the control unit for generating a surround-view video sequence of the fixation point based on output from certain of the image generators (col 11 lines 59-62).

As per **claim 2**, Foote discloses the system of claim 1, further comprising an inter-image capturing device calibration database in communication with the surround-view image sequence generator (col 9 lines 52-61; Foote discloses calibration between two cameras).

As per **claim 3**, Foote discloses the system of claim 1, wherein the first image generator is responsive to a viewing angle command and a zoom command from the control unit (col 6 lines 37-43).

As per **claim 4**, Foote discloses the system of claim 1, wherein the surround-view image sequence generator is for generating the surround-view video sequence of the fixation point within the scene by outputting an image from certain of the image generators in sequence according to the position of the image capturing devices around the scene (Fig 12 element 1220; col 11 lines 59-62).

As per **claim 5**, Foote discloses the system of claim 4, wherein the surround-view image sequence generator includes:

a mapping module for outputting a command to each of the image generators other than the first image generator based on the command from the control unit (col 11 lines 59-62); and

an image sequencing module in communication with each of the image generators for outputting the image from certain of the image generators in sequence according to the position of the image generators around the scene (col 11 lines 59-62).

As per **claim 6**, Foote discloses the system of claim 4, further comprising an inter-image capturing device calibration database in communication with the mapping module (col 9 lines 52-61).

As per **claim 7**, Foote discloses the system of claim 1, wherein each of the image capturing devices includes a camera bank including a plurality of non-moving cameras (Fig 1b, Col 5 Ln 64 - 66).

As per **claim 8**, Foote et al disclose the system of claim 7, wherein at least one of the image generators is in communication with an intra-bank calibration database (Col 6 Ln 19-43; the prior art discloses the images being taken coming from individual cameras which serve as the database for the images taken by that camera).

As per **claim 9**, Foote discloses wherein each of the image capturing devices includes a non-moving panoramic wide field of view camera (Fig 2A, Col 6 Ln 19-30).

As per **claim 10**, Foote discloses wherein each of the image capturing devices is selected from the group consisting of a non-moving panoramic wide field of view camera and a camera bank having a plurality of non-moving cameras (Col 6 Ln 31-43).

As per **claim 11**, Foote discloses the system of claim 1, wherein the image capturing devices are periodically positioned around the scene (col 7 lines 4-7).

As per **claim 14**, Foote discloses the system of claim 1, the system further comprising a computer vision module in communication with the control unit (col 7 lines 64-67).

As per **claim 15**, Foote discloses the system of claim 1, wherein the computer vision module is further for selecting a second image generator to be responsive to the command from the control unit (col 7 lines 64-67).

As per **claim 16**, Foote discloses the system of claim 1, further comprising  
  
a second control unit, wherein one of the image generators (Fig 1A element 10)  
is responsive to a command from the second control unit (col 6 lines 37-43), and  
  
wherein the surround-view image sequence generator is further for generating a  
second surround-view video sequence of a second fixation point within the scene based  
on output from certain of the image generators and the command from the second  
control unit (col 11 lines 59-62).

As per **claim 17**, Foote discloses the system of claim 16, wherein the first image  
generator (Fig 1A, element 10) is responsive to the command from the second control  
unit (col 6 lines 37-43).

Regarding **claim 18**, arguments analogous to those presented for claim 1 and 3-  
5 are applicable for claim 18.

Regarding **claim 19**, arguments analogous to those presented for claim 6 are  
applicable for claim 19.

Regarding **claim 20**, arguments analogous to those presented for claim 10 are  
applicable for claim 20.

Regarding **claim 21**, arguments analogous to those presented for claim 11 are  
applicable for claim 21.



Regarding **claim 22**, arguments analogous to those presented for claim 14 are applicable for claim 22.

Regarding **claim 23**, arguments analogous to those presented for claims 3, 5, and 16 are applicable for claim 23.

Regarding **claim 24**, arguments analogous to those presented for claim 3 are applicable for claim 24.

Regarding **claim 27**, arguments analogous to those presented for claims 1 and 18 are applicable for claim 27.

Regarding **claim 28**, arguments analogous to those presented for claim 10 are applicable for claim 28.

Regarding **claim 29**, arguments analogous to those presented for claim 11 are applicable for claim 29.

Regarding **claim 30**, arguments analogous to those presented for claim 3 are applicable for claim 20.

Regarding **claim 31**, arguments analogous to those presented for claims 3, 4, and 12 are applicable for claim 31.

Regarding **claim 32**, arguments analogous to those presented for claim 13 are applicable for claim 32.

Regarding **claim 33**, argument analogous to those presented for claims 1 and 3 are applicable for claim 33.

Foote et al teach a virtual camera (Col 6 Ln 31-43).

Regarding **claim 34**, arguments analogous to those presented for claim 5 are applicable for claim 34.

Regarding **claim 35**, arguments analogous to those presented for claim 23 and 33 are applicable for claim 35.

Regarding **claim 36**, arguments analogous to those presented for claim 5 are applicable for claim 36 (the prior art describes a system that is operating continuously and therefore take multiple images to produce multiple scenes based on the position given to the system).

6. Claims 12-13 and 25-26 rejected under 35 U.S.C. 103(a) as being unpatentable over Foote et al (US 7,015,954) in view of DiMatteo (US 4,396,945).

As per **claim 12**, Foote discloses the system of claim 1, a system further comprising:

an additional image generator in communication with the moving camera and in communication with the surround-view image sequence generator col 11 lines 53-55),

wherein the additional image generator is responsive to a second command based on the command from the control unit (col 6 lines 39-43).

However, Foote does not explicitly teach a system further comprising:

a moving camera having a field of view within the scene; and

In the same field of endeavor, DiMatteo et al teach a system further comprising:

a moving camera (Fig 2, element 17) having a field of view within the scene (Col 3 Ln 6-8; the prior art discloses that the cameras are servo controlled to center the field of view).

Therefore, it would have been obvious for one having ordinary skill in the art at the time of the invention to modify the invention of Foote in view of DiMatteo et al. The high optical magnification optimizes the angle determining precision of the system (Col 3 Ln 10-12).

As per **claim 13**, Foote discloses the system of claim 12, wherein the moving camera includes a pan/tilt camera (col 6 lines 37-43).

Regarding **claim 25**, arguments analogous to those presented for claims 5 and 12 are applicable for claim 25.

Regarding **claim 26**, arguments analogous to those presented for claim 13 are applicable for claim 26.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIKAODILI E. ANYIKIRE whose telephone number is (571)270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272 - 7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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